

Amendments to the Drawings:

Figs. 3-6 have been amended to be labeled as "Prior Art" as required by the Examiner.

Attachment: Annotated Sheets Showing Changes
 Replacement Sheets

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE SPECIFICATION

The specification has been amended to refer to reference numeral 134, which is shown in FIG. 5A, as well as to make two minor grammatical improvements, and to correct two typographical errors.

No new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered.

THE DRAWINGS

Figs. 3-6 have been amended to be labeled as "Prior Art" as required by the Examiner.

Submitted herewith are corrected sheets of formal drawings which incorporate the amendments and annotated sheets showing the changes made thereto.

No new matter has been added, and it is respectfully requested that the amendments to the drawings be approved and entered, and that the Examiner's objection to the drawings be withdrawn.

THE CLAIMS

Independent claims 1 and 2 have been amended to more clearly recite that the exciting light and detecting light are irradiated onto a sample through a same converging lens, and independent claims 4 and 5 have been similarly amended to more clearly recite that the converging lens convergently irradiates both exciting light and detecting light onto a sample. This feature of the present invention was already recited in independent claims 1, 2, 4 and 5, and the recitation thereof has merely been clarified in amended independent claims 1, 2, 4 and 5.

In addition, claims 1-8 have been amended to make a few minor grammatical improvements so as to put them in better form for issuance in a U.S. patent.

No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered.

It is respectfully submitted, moreover, that the amendments to the claims are not related to patentability, and do not narrow the scope of the claims either literally or under the doctrine of equivalents.

THE PRIOR ART REJECTION

Claims 1, 2, 4 and 5 were rejected under 35 USC 103 as being obvious in view of the combination of USP 4,243,327 ("Frosch et al") and the disclosure of "Prior Art" Figs. 3-6 of the present application; and claims 3 and 6-8 were rejected under 35 USC 103 as being obvious in view of the combination of Frosch et al, Figs. 3-6 of the present application, and USP 5,253,102 ("Okazaki"). These rejections, however, are respectfully traversed.

On page 3 of the Office Action, the Examiner asserts that lens 20'' in Fig. 2B of Frosch et al is a converging lens for converging exciting light and detecting light onto a sample, and the Examiner asserts that light beam 12' (referred to by the Examiner as light beam 12'') of Frosch et al is "exciting light" in the manner of the claimed present invention. The Examiner has not identified a "detecting light" in Frosch et al.

It is respectfully pointed out, however, that the exciting light of Frosch et al, which is used to create a thermal lens, is actually pulsed laser light beam 10' that is irradiated from pulse laser light source 10. See, for example, Fig. 1, column 3, lines 41-43, and column 3, line 67 to column 4, line 2 of Frosch et al.

The probe light beam 12' of Frosch et al, on the other hand, is detecting light that passes through the thermal lens in the

sample created by light beam 10' and that exhibits an intensity change due to the altered index of refraction in the sample caused by the thermal lens. Indeed, the probe light beam 12' of Frosch et al clearly cannot be an exciting light in the manner of the claimed present invention, since according to Frosch et al the probe light source 12 "must be of sufficiently low power so that it does not deposit any significant energy in the sample material 18" (column 4, lines 44-48).

Thus, it is respectfully submitted that Frosch et al discloses an exciting light (pulsed laser light beam) 10' and a detecting light (probe light beam) 12'.

As shown in Fig. 1 of Frosch et al, moreover, the pulsed laser light beam 10' and the probe light beam 12' are irradiated onto the sample from different directions through respective different lenses 16 and 20.

It is respectfully submitted, therefore, that Frosch et al clearly does not disclose, teach or suggest the feature of the present invention whereby exciting light and detecting light are convergently irradiated onto a sample through a same converging lens, as recited in amended independent claims 1 and 2, or the feature of the present invention whereby a converging lens is provided for convergently irradiating both exciting light and detecting light onto a sample, as recited in amended independent claims 4 and 5.

Therefore, it is respectfully submitted that Frosch et al clearly does not disclose, teach or suggest that the converging lens (through which both the exciting and detecting light are irradiated) satisfies a condition that a length of a shift in a focal position of the detecting light from a focal position of the exciting light is in a range of 2 times to 30 times (or 2 times to 25 times) a confocal length at the frequency of the exciting light, in the manner of the present invention as recited in independent claims 1, 2, 4 and 5.

On page 3 of the Office Action, the Examiner asserts that focal points 38 and 40 in Fig. 2B of Frosch et al, and the disclosure at column 5, lines 1-35 and Figs. 1-7 of Frosch et al teach that the converging lens 20'' satisfies a condition such that a length of a shift in a focal position of the detecting light from a focal position of the exciting light is around 2 times a confocal length at the frequency of the exciting light.

It is respectfully pointed out, however, that point 38 in Fig. 2B of Frosch et al merely represents a focal point of the probe light beam 12' as though there were no thermal lens 30, and the point 40 in Fig. 2B of Frosch et al shows the new position of the focal point of the probe light beam 12' due to the thermal lens 30. And it is respectfully submitted that column 5, lines 1-35 of Frosch et al merely explains that the intensity of the probe light beam 12' having passed through the thermal

lens 30 decreases if the focal point of the probe light beam 12' is before the thermal lens 30 (Fig. 2A) and increases if the focal point of the probe light beam 12' is after the thermal lens 30 (Fig. 2B).

In addition, it is respectfully submitted that Frosch et al does not disclose, teach or suggest a desired relationship between (a) the length of the shift in the focal position of the detecting light from the focal position of the exciting light and (b) a confocal length at the frequency of the exciting light, in the manner of the claimed present invention.

Figs. 3-6 of the present application, moreover, have merely been cited for the disclosure of exciting and detecting light beams having different frequencies. And Okazaki has merely been cited for the disclosure of a rod lens.

In view of the foregoing, it is respectfully submitted that the present invention as recited in independent claims 1, 2, 4 and 5, as well as claims 3 and 6-8 respectively depending therefrom, clearly patentably distinguishes over Frosch et al, Figs. 3-6 of the present application, and Okazaki, taken singly or in any combination consistent with the respective fair teachings thereof, under 35 USC 103.

* * * * *

Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

/Douglas Holtz/

Douglas Holtz
Reg. No. 33,902

Frishauf, Holtz, Goodman & Chick, P.C.
220 Fifth Avenue - 16th Floor
New York, New York 10001-7708
Tel. No. (212) 319-4900
Fax No. (212) 319-5101

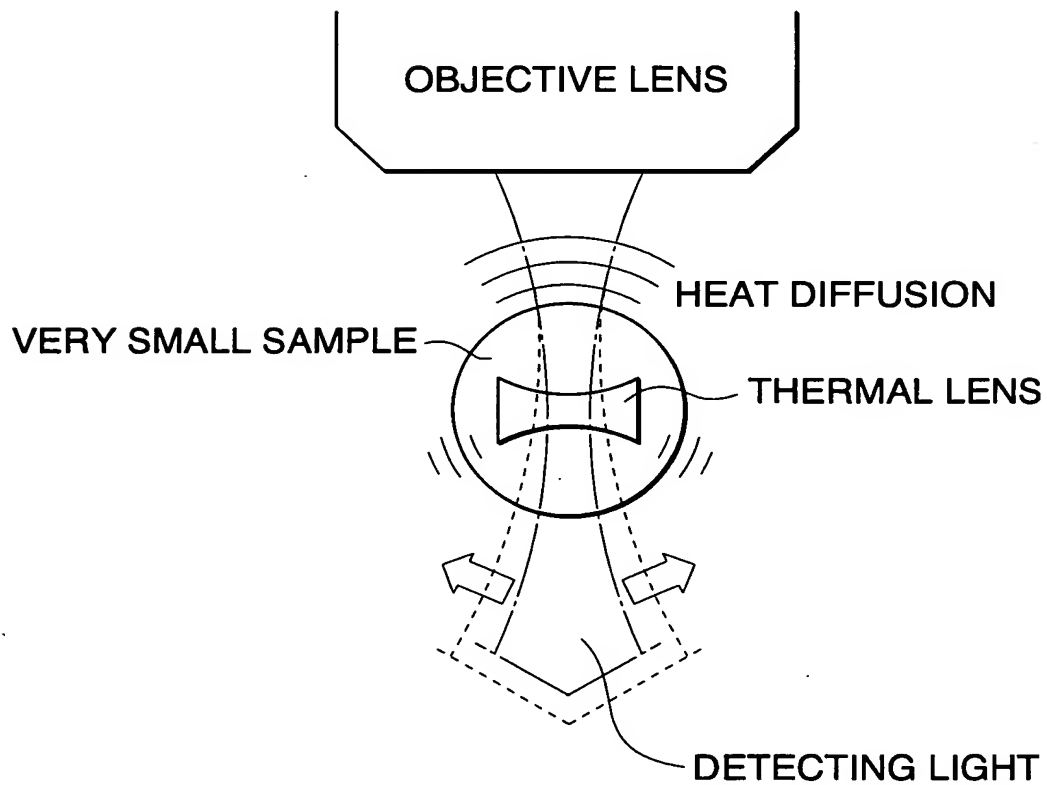
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FIG. 3

PRIOR ART



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FIG. 4A
PRIOR ART

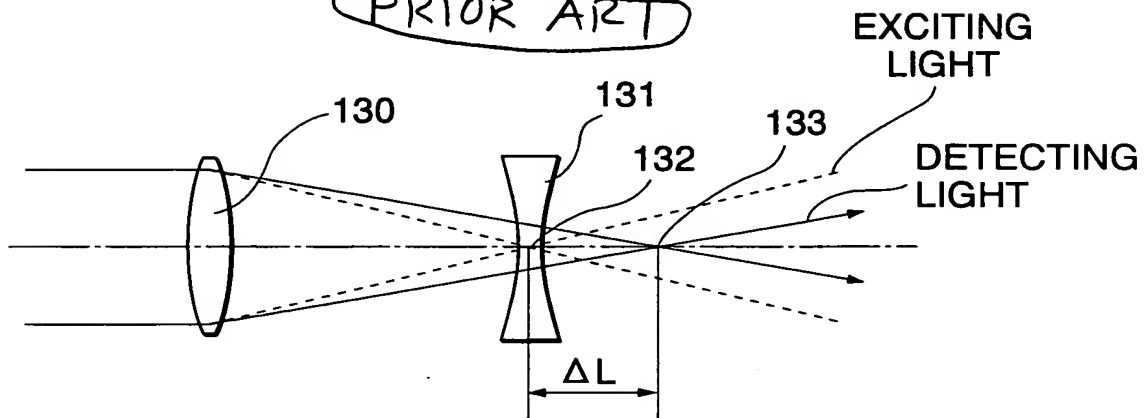
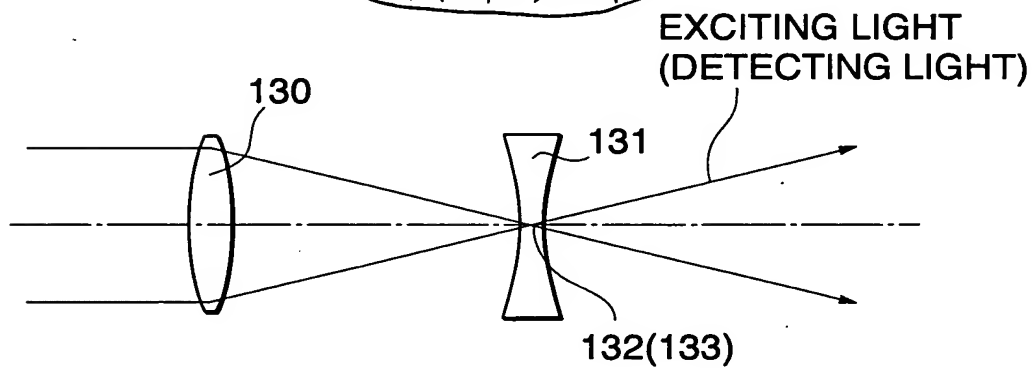


FIG. 4B
PRIOR ART



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FIG. 5A

PRIOR ART

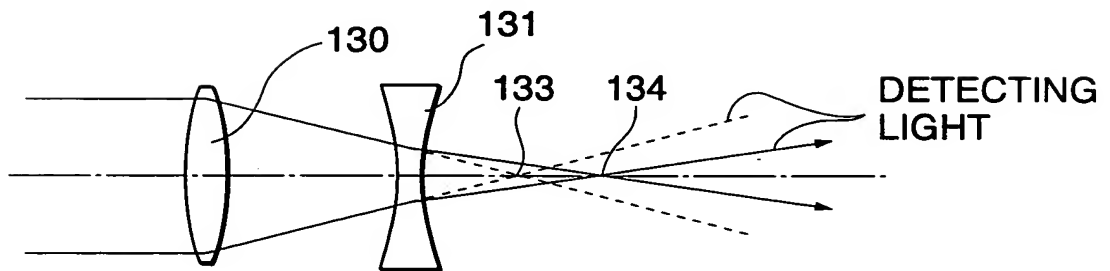
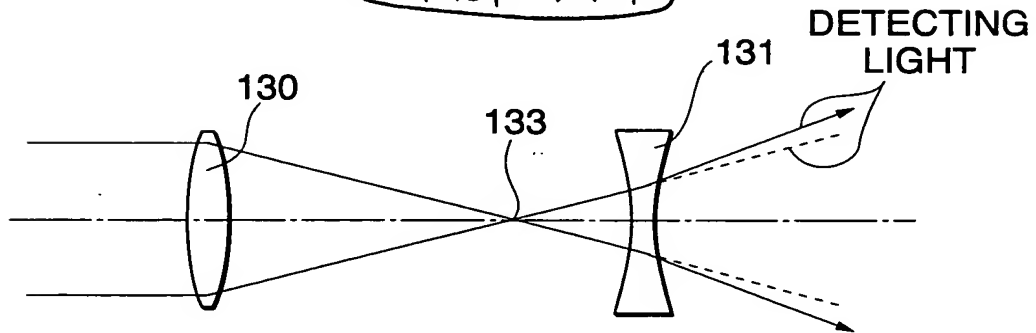


FIG. 5B

PRIOR ART



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FIG. 6
PRIOR ART

